

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number  
**WO 2005/060106 A1**

(51) International Patent Classification<sup>7</sup>: **H03M 13/27**  
(21) International Application Number:  
PCT/TB2004/004319

(22) International Filing Date: 8 December 2004 (08.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
0328783.6 11 December 2003 (11.12.2003) GB

(71) Applicant (for all designated States except US):  
**FREESCALE SEMICONDUCTOR, INC.** [US/US];  
6501 William Cannon Dr., Austin, TX 78735 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KUTZ, Gideon**  
[IL/IL]; Motorola Israel LTD, 1 Shenkar Street Industrial  
Zone, 46120 Herzelia (IL). **CHASS, Amir, I.** [IL/IL];  
Motorola Israel LTD, 1 Shenkar Street Industrial Zone,  
46120 Herzelia (IL).

(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.

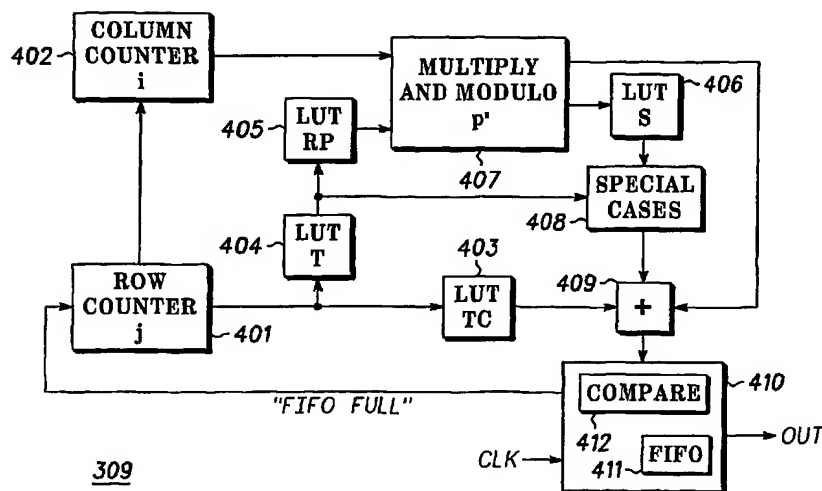
(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO,  
SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,  
GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: MULTI-STANDARD TURBO INTERLEAVER USING TABLES



(57) Abstract: An interleaver for a turbo encoder and decoder (309) comprising a first table (409) populated with a first set of parameters to allow intra-row permutation of data within an array in accordance with a first wireless communication standard when operation in the first wireless communication standard is required and a second table (403) populated with a second set of parameters to allow inter-row permutation of the data in accordance with the first wireless communication standard when operation in the first wireless communication standard is required wherein the first table is populated with a third set of parameters to allow intra-row permutation of data within an array in accordance with a second wireless communication standard when operation in the second wireless communication standard is required and to populate the second table with a fourth set of parameters to allow inter-row permutation of the data in accordance with the second wireless communication standard when operation in the second wireless communication standard is required.



— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*